

**State Board of Education
February 16, 2010
Item J**

Team: Standards and Assessment

Discussion Topic: Release of the 2009 NECAP results in mathematics, reading and writing

Alignment with Goals:

Goal I. Support high-quality, innovative instruction to improve student achievement.

Objective A. All students achieving their full potential.

Statutory Authority: V.S.A. § 164 (9)

Background Information:

The Commissioner released the results of the fall 2009 administration of the New England Common Assessment (NECAP) on February 2, 2010. These results reflect the achievement of Vermont students in mathematics, reading, and writing for the 2008-2009 school year.

Purpose of Discussion:

- Increase understanding of the 2009 statewide results, trends, areas of most improvement and those of continuing concern will inform strategic planning
- Update on testing program changes and improvements, including the new data analysis and reporting tool that will allow administrators to delve into scores to support program evaluation and systems change.

Cost Implications: N/A

Staff Available: Armando Vilaseca, Commissioner; Gail Taylor, Director, Research, Standards and Assessment; Michael Hock, Assessment Director



**STATE OF VERMONT
Department of Education
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Montpelier, VT 05620-2501**

Vermont Statewide Assessment Results Released

MONTPELIER – Statewide assessment results for Fall 2009 were released by the Vermont Department of Education today at a special press conference held at U-32 Junior-Senior High School in East Montpelier. The results are from the New England Common Assessment Program (NECAP) exams, given to Vermont public school students in grades three through eight and 11. Students were tested in Reading and Mathematics in all seven grades, and in Writing at grade 11 only.

The following table illustrates the percent of Vermont students proficient in the content area by grade span:

Grade Level	Reading	Math	Writing
Elementary/Middle School (3-8)	72%	66%	N/A
High School (11)	69%	35%	51%

“These results show that we continue to improve instruction and slowly but surely see better outcomes for students,” noted Commissioner Armando Vilaseca. “Efforts to improve instruction in schools are paying off for kids. However, we still have a lot of work to do to ensure this is happening in all Vermont schools, not just the ones like U-32 that have risen to the challenge.”

U-32 was chosen as the site of the press conference because of impressive student results on the exams. U-32’s 11th graders had the highest overall performance in the state. Compared with the prior year, eleventh-grade scores increased 11 percentage points in Reading, seven in Math and 21 in Writing. Eleventh-graders closed the achievement gap between students in poverty and their peers in Writing by more than 20 percentage points. Those same students also scored above the state average in all three content areas (+5 in reading, +15 in math and +14 in writing).

“The high school NECAP results are particularly important because they reflect the cumulative effects of a decade of instruction going all the way back to elementary school,” said Michael Hock, Assessment Director for the Vermont Department of Education. “U-32 can be proud of these test results, but credit can also be shared across the entire Washington Central Supervisory Union whose students come to U-32.”

“The improvement in our NECAP scores was realized by enhancing an academic environment that encourages students to demonstrate what they have learned,” said Principal Keith Gerritt. “U-32 has had a long-standing focus on writing across the curriculum. Over the past few years,

our professional development has concentrated on reviewing and understanding assessment and how teachers can use assessment results in regular classroom work.”

In preparation for NECAP this past Fall, a number of initiatives were implemented at U-32 to foster student engagement, such as consistent encouragement, assemblies, dedicated testing times, and providing test takers with food and drink during the testing. This created a supportive and effective testing environment, and proved that student engagement, especially at the high school level, is critical to true demonstration of achievement.

The NECAP exams are given in collaboration with Maine, New Hampshire and Rhode Island. These exams are designed to specifically assess how well Vermont students have learned the skills and content contained in *Vermont's Framework of Standards and Learning Opportunities*. This is the fifth year of results on the NECAP exams for grades three through eight and the third year for grade 11. As required under the No Child Left Behind Act, a science assessment is given in May in grades four, eight and 11.

For the complete packet of state results, including the Power Point from today's press conference, visit http://education.vermont.gov/new/html/dept/press_releases.html.

For school-by-school results, visit:

http://www.education.vermont.gov/new/html/pgm_assessment/data.html#necap.

To view some of the actual test items from this round of assessments, visit

http://education.vermont.gov/new/html/pgm_assessment/necap/resources/released_items.html#09.

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February 2, 2010

New England Common Assessment Program (NECAP) Fall 2009 Vermont Results





What is NECAP?

- **The New England Common Assessment Program (NECAP) is a collaborative effort of the Maine, New Hampshire, Rhode Island and Vermont Departments of Education**
- **Administered each year in October**
- **Reading and Mathematics are assessed in grades 3 through 8 and Grade 11**
- **Writing is assessed in grades 5, 8 and 11 (Note: No writing results this year for grades 5 and 8 because of field-testing new items and prompts)**
- **45,695 Vermont students were tested in 2009**



What is NECAP?

NECAP is fully aligned with Vermont Standards and Grade Expectations:

DSP 2.1 Interprets a given representation (pictographs with one-to-one correspondence, line plots, tally charts, or tables) to answer questions related to the data, or to analyze the data to formulate conclusions.

(IMPORTANT: *Analyzes data consistent with concepts and skills in M(DSP)–2–2.*)

- 9 This pictograph shows the animals on Ms. Howe's farm.

Animals on Ms. Howe's Farm

Cows	x x x x x
Horses	x x
Goats	x x x
Pigs	x x x x

Key

x represents 1 animal

How many more cows than goats are on Ms. Howe's farm?

- ☐ A. 1
- ☐ B. 2
- ☐ C. 3
- ☐ D. 5

One of the things students should know by the end of second grade

One of the ways we try to find out if they know it

Grade 3 Math Item



What is NECAP?

NECAP uses a variety of item types:

Read this article about a surprising use of X-rays. Then answer the questions that follow.

X-ray Detectives Carla Killough McClafferty

- 1 Some wonderfully creative uses of X-rays have been in the world of art. X-rays themselves have influenced artists. According to an article in *Art Journal*, a group of artists in the early twentieth century known as cubists may have been partly inspired by the X-ray images they saw. Their abstract painting sometimes showed the interior of solid objects in a way similar to the way X-rays revealed hidden structures. Some of these artists used light and shadow to create skeletonlike shapes that resemble X-rays.



LEFT: One of the earliest horse sculptures by Edgar Degas, *Horse at Trough*, from the early 1860s. The figure has been formed from brown wax with red highlights and rests on a wooden base. Degas's attention to detail can be especially seen in the horse's mane, mouth, and nostrils.



RIGHT: An X-ray of the same sculpture shows that this attention to detail began on the inside. Degas built an intricate, almost lifelike, metal skeleton by wrapping and twisting wire before he began sculpting with wax. You can also see the nails he used to build the wooden base. Without the benefit of X-rays, we'd never be able to see the inner support for this work of art without destroying it.

Multiple Choice:
Students select their
answer from 4 options

- 3 In the first paragraph, which information suggests that X-rays may have influenced artists?
- A. They used reverse images.
 - B. They showed inside views of subjects.
 - C. They used black and white paint.
 - D. They showed outline images of subjects.



What is NECAP?

NECAP uses a variety of item types:

- 14 This table shows the numbers of baseball cards seven students collected.

Student	Number of Baseball Cards
Harriet	62
John	54
Kate	56
Raul	50
Masako	52
Charlie	53
Dewayne	58

Constructed Response:
Students solve the problem and explain their reasoning

What is the median number of baseball cards the students collected? Show your work or explain how you know.

Grade 5 Math Item



What is NECAP?

NECAP uses a variety of item types:

Writing Procedure

- ① Your group is holding a car wash to raise money. You are responsible for developing a procedure to explain how to do a thorough job cleaning vehicles and pleasing your customers. Write the procedure. You may include text features (diagrams, bullets/numbers, etc.) to help the reader.

Before writing, consider

- *what the reader needs to know about this procedure*
- *the steps in this procedure*
- *potential problems with this procedure*

Grade 11 Writing Item

Extended Response:
Students write an
essay – expressive,
informational or
response to text

A complete response to the prompt will include

- ☒ a clear purpose/focus
- ☒ coherent organization
- ☒ details/elaboration
- ☒ well-chosen language and a variety of sentence structures
- ☒ control of conventions



What is NECAP?

Scores are reported at 4 achievement levels:

Level 4: Proficient with Distinction	Demonstrates the prerequisite knowledge and skills needed to participate and excel in instructional activities aligned with the grade expectations at the current grade level. Errors are minor and do not reflect gaps in prerequisite skills and knowledge.
Level 3: Proficient	Demonstrates minor gaps in the prerequisite knowledge and skills needed to participate and perform successfully in instructional activities aligned with the grade expectations at the current grade level. Any gaps in prerequisite skills and knowledge can be addressed in the course of typical classroom instruction.
Level 2: Partially Proficient	Demonstrates gaps in the prerequisite knowledge and skills needed to participate and perform successfully in instructional activities aligned with the grade expectations at the current grade level. Additional instructional support may be necessary for these students to meet grade level expectations.
Level 1: Substantially Below Proficient	Demonstrates extensive and significant gaps in the prerequisite knowledge and skills needed to participate and perform successfully in instructional activities aligned with the grade expectations at the current grade level. Additional instructional is necessary for these students to meet grade level expectations.

Why are we visiting U 32?



U 32's students did some exceptional work on the Fall 2009 NECAP Tests:

Grade 11:

- 79% proficient or above in reading – 10 percentage points higher than this year's state average and 16 percentage points higher than last year
- 50% proficient or above in mathematics – 15 percentage points higher than this year's state average and 7 percentage points higher than last year
- 65% proficient or above in writing – 14 percentage points higher than this year's state average and 21 percentage points higher than last year

Grade 8:

- 74% proficient or above in reading – matches this year's state average and 11 percentage points higher than last year
- 69% proficient or above in mathematics – 4 percentage points higher than this year's state average and 9 percentage points higher than last year

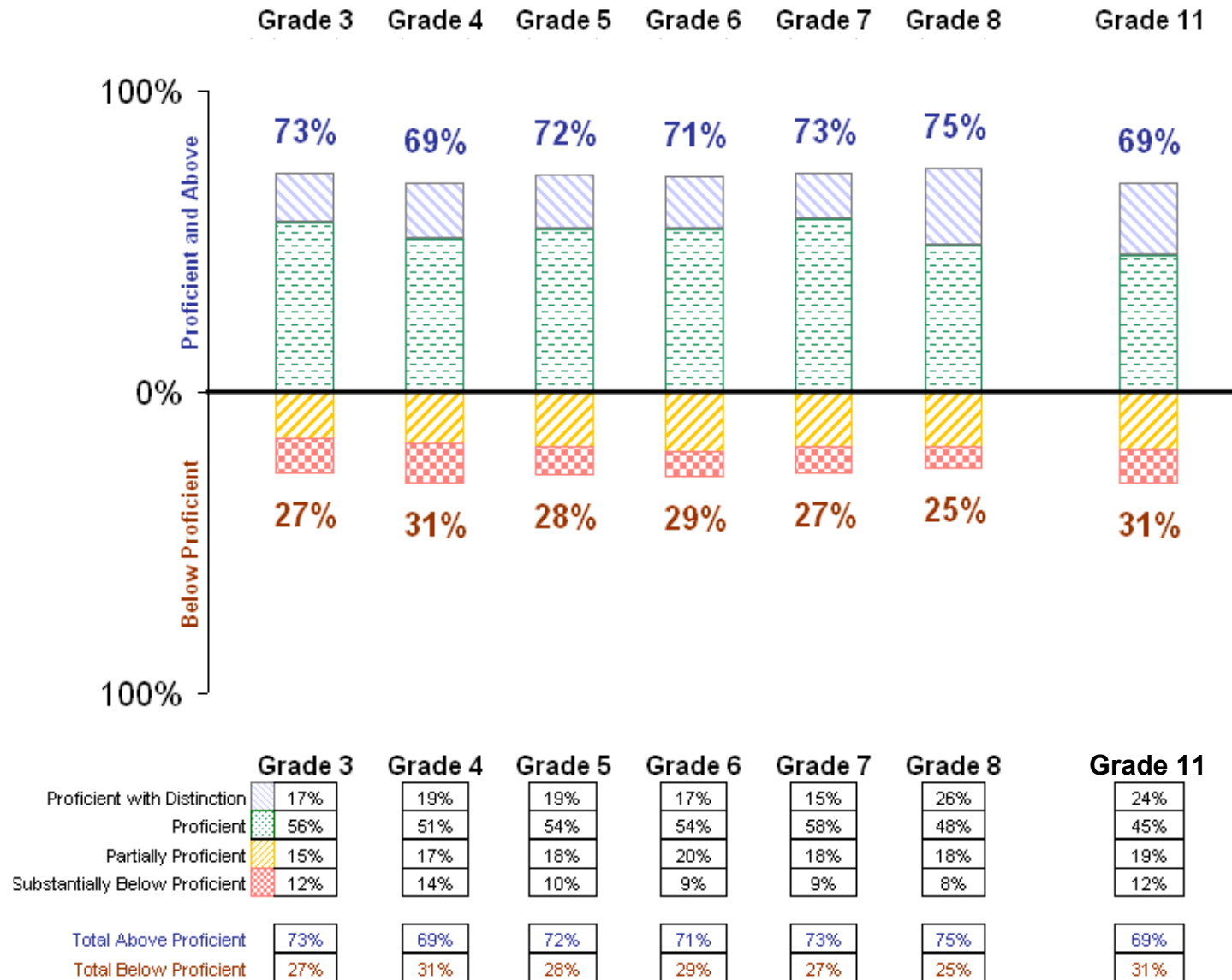
Note: Grade 7 students, who also had good scores, are not included here because at the time of testing they had only been at U 32 for 1 month.



2009 Statewide Results

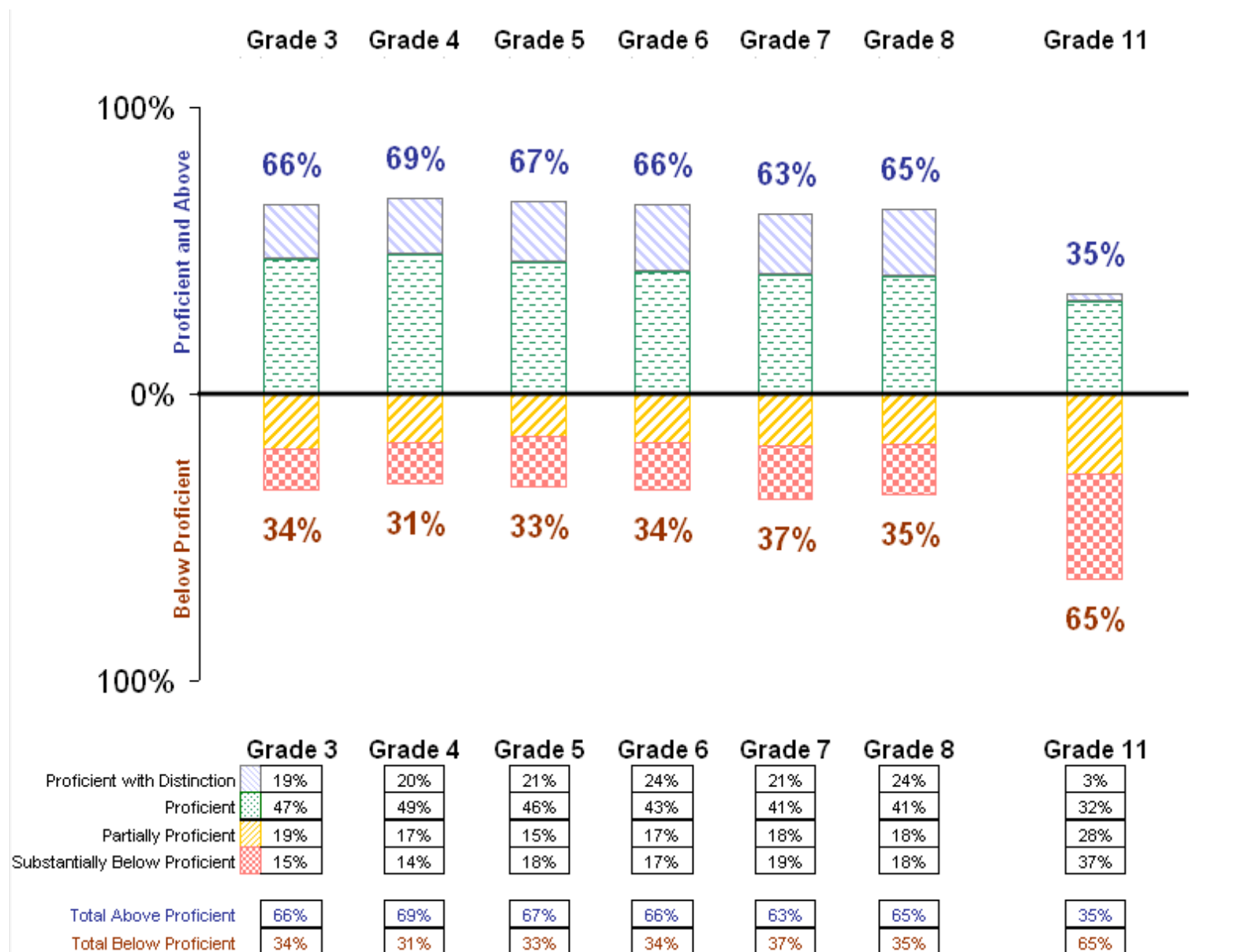
2009 NECAP Reading Achievement for Grades 3 – 8 and 11

What percentage of students at each grade level met reading grade expectations?



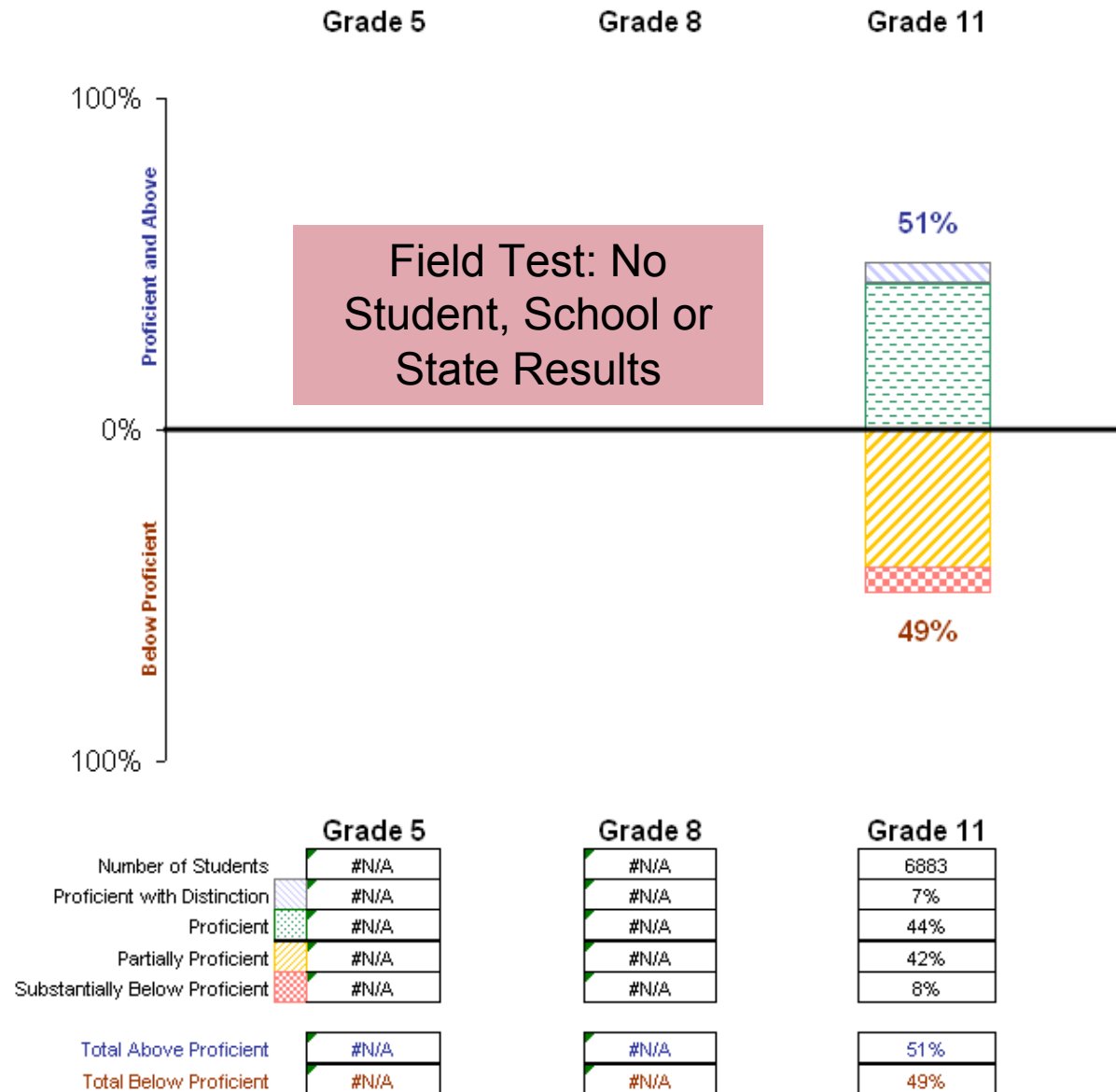
2009 NECAP Mathematics Achievement for Grades 3 – 8 and 11

What percentage of students at each grade level met math grade expectations?



2009 NECAP Writing Achievement for Grades 3 – 8 and 11

What percentage of students at each grade level met writing grade expectations?

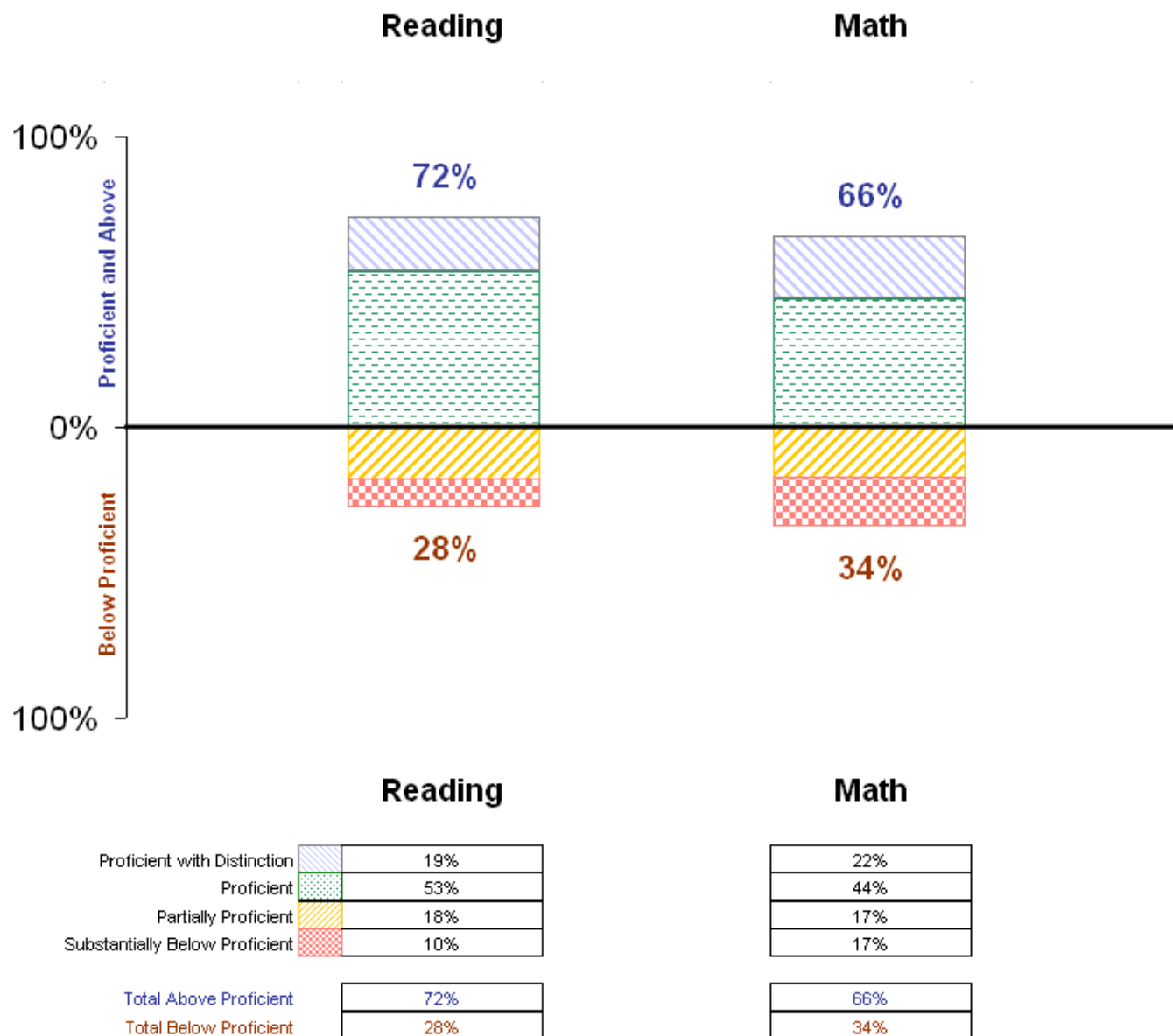




Statewide Analysis for Grades 3-8

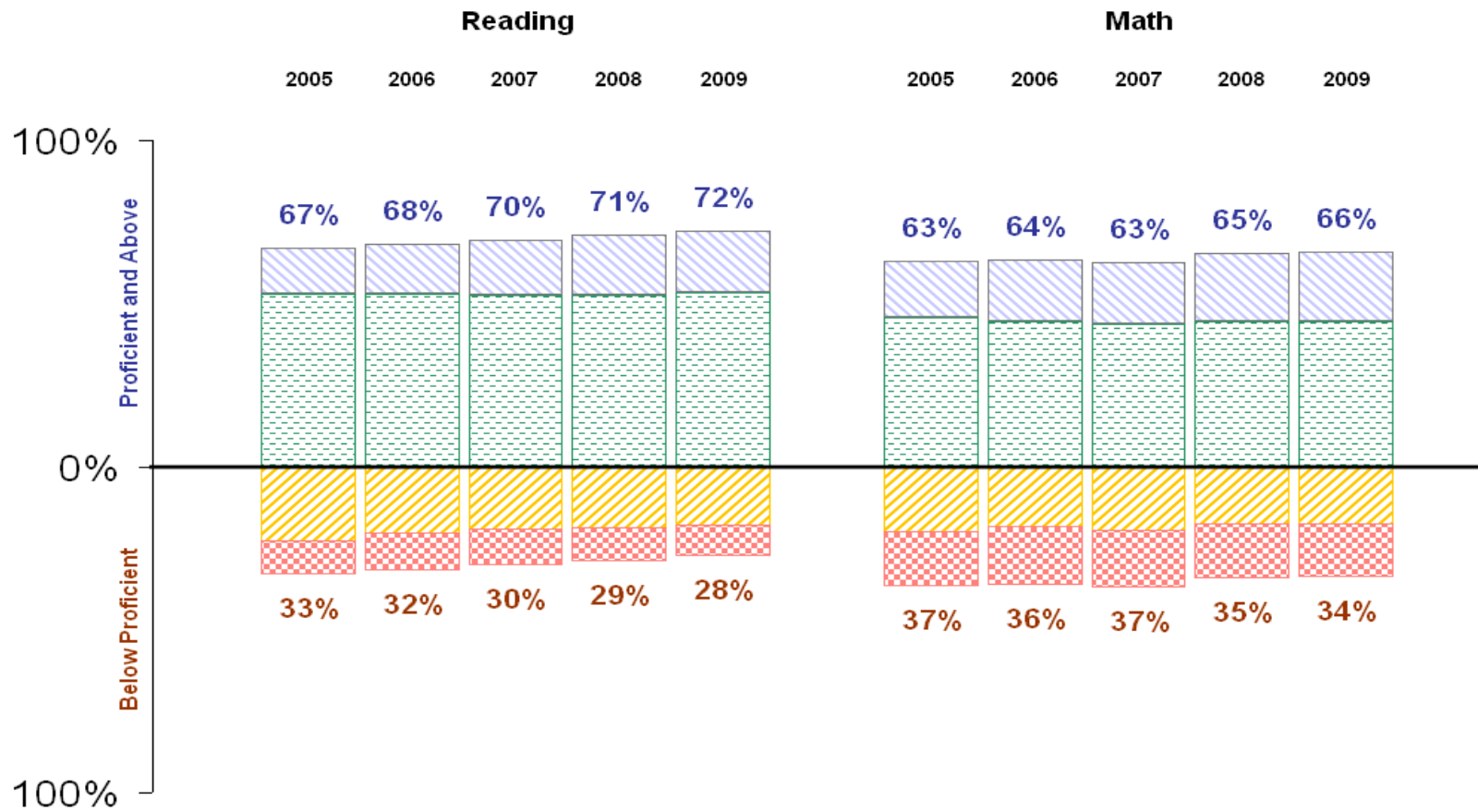
2009 NECAP Achievement for Grades 3 - 8

How did elementary/middle school students do in reading and math?



Grades 3 - 8 NECAP Achievement Over the Past 5 Years

How do 2009 scores compare with previous years? Are scores improving over time?

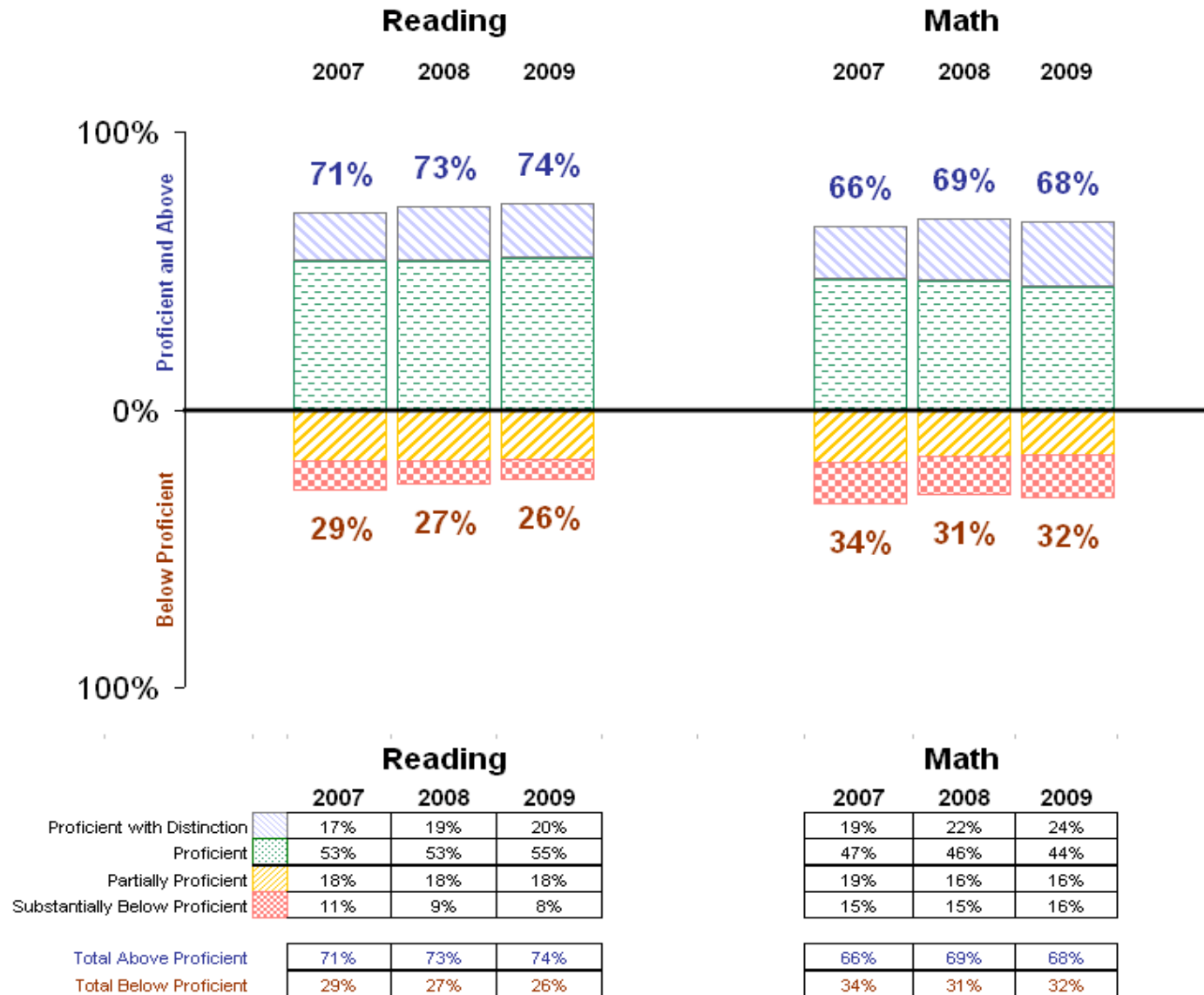


		2005	2006	2007	2008	2009
Proficient with Distinction		14%	15%	17%	18%	19%
Proficient		53%	53%	53%	53%	53%
Partially Proficient		23%	20%	19%	19%	18%
Substantially Below Proficient		10%	12%	11%	10%	10%
Total Above Proficient		67%	68%	70%	71%	72%
Total Below Proficient		33%	32%	30%	29%	28%

		2005	2006	2007	2008	2009
Proficient with Distinction		18%	19%	19%	21%	22%
Proficient		45%	44%	44%	45%	44%
Partially Proficient		20%	18%	19%	18%	17%
Substantially Below Proficient		17%	18%	18%	17%	17%
Total Above Proficient		63%	64%	63%	65%	66%
Total Below Proficient		37%	36%	37%	35%	34%

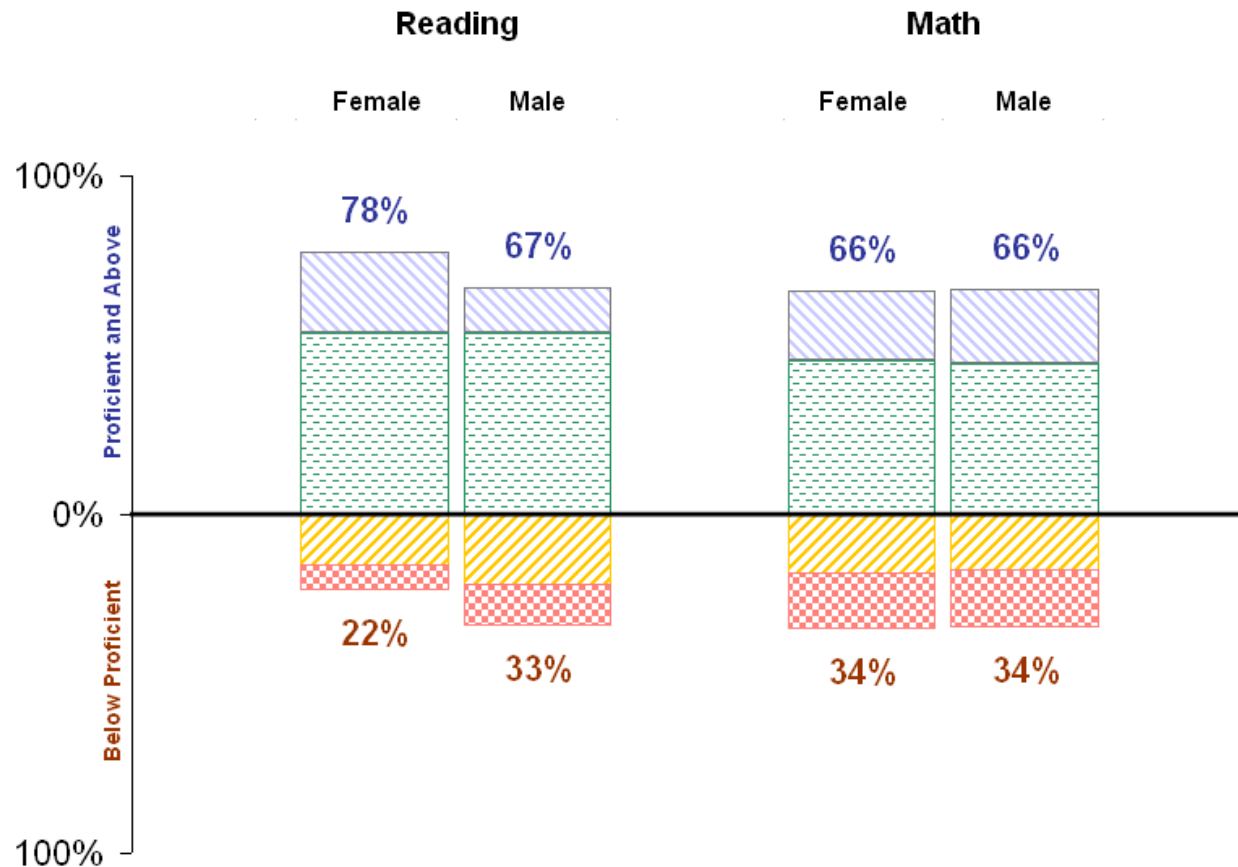
Individual Student Growth in Grades 3 – 8 Over 3 Years of Testing

Are students who spent the last 3 years in the same school improving over time?



2009 NECAP Achievement for Grades 3 - 8

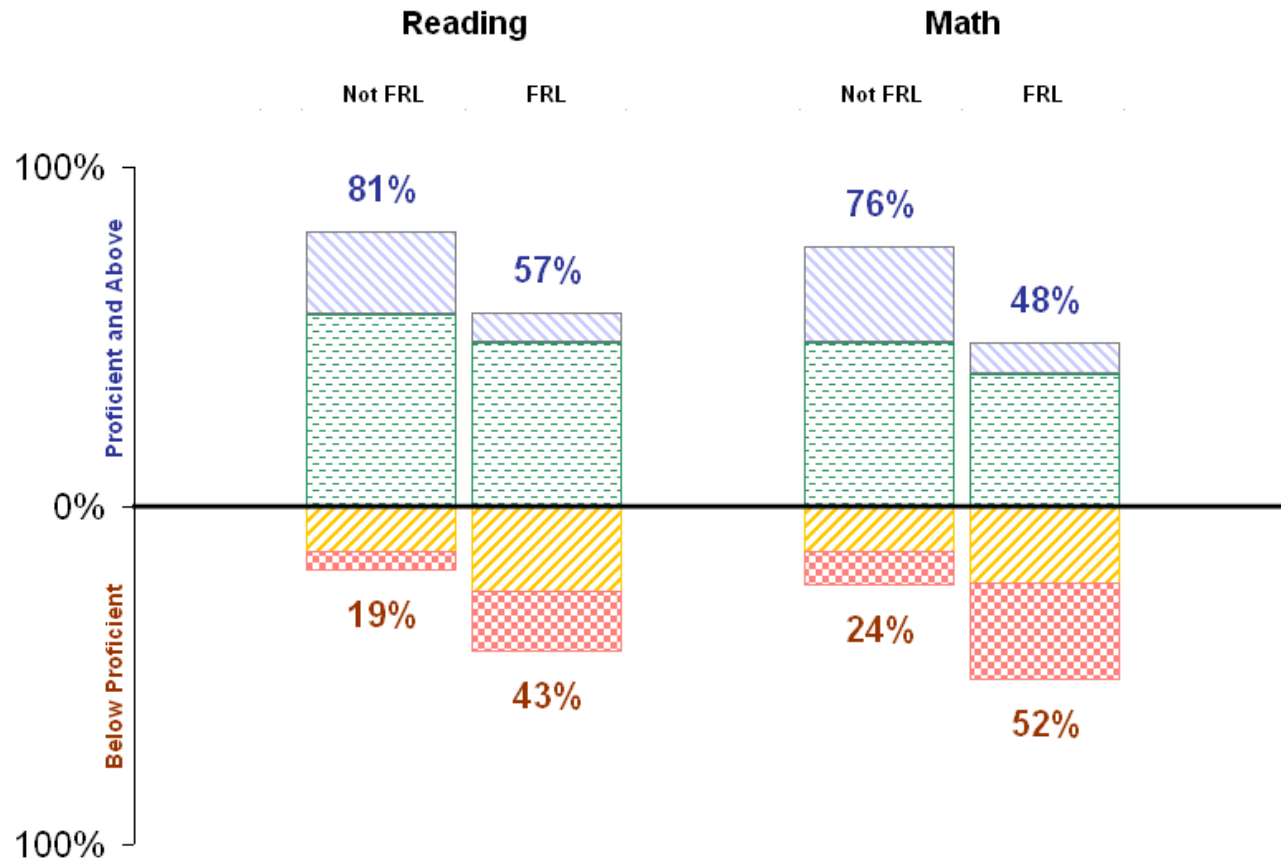
Are there differences in achievement related to gender?



	Reading		Math	
	Female	Male	Female	Male
Proficient with Distinction	24%	14%	21%	22%
Proficient	54%	53%	45%	44%
Partially Proficient	15%	21%	17%	16%
Substantially Below Proficient	8%	12%	16%	17%
Total Above Proficient	78%	67%	66%	66%
Total Below Proficient	22%	33%	34%	34%

2009 NECAP Achievement for Grades 3 - 8

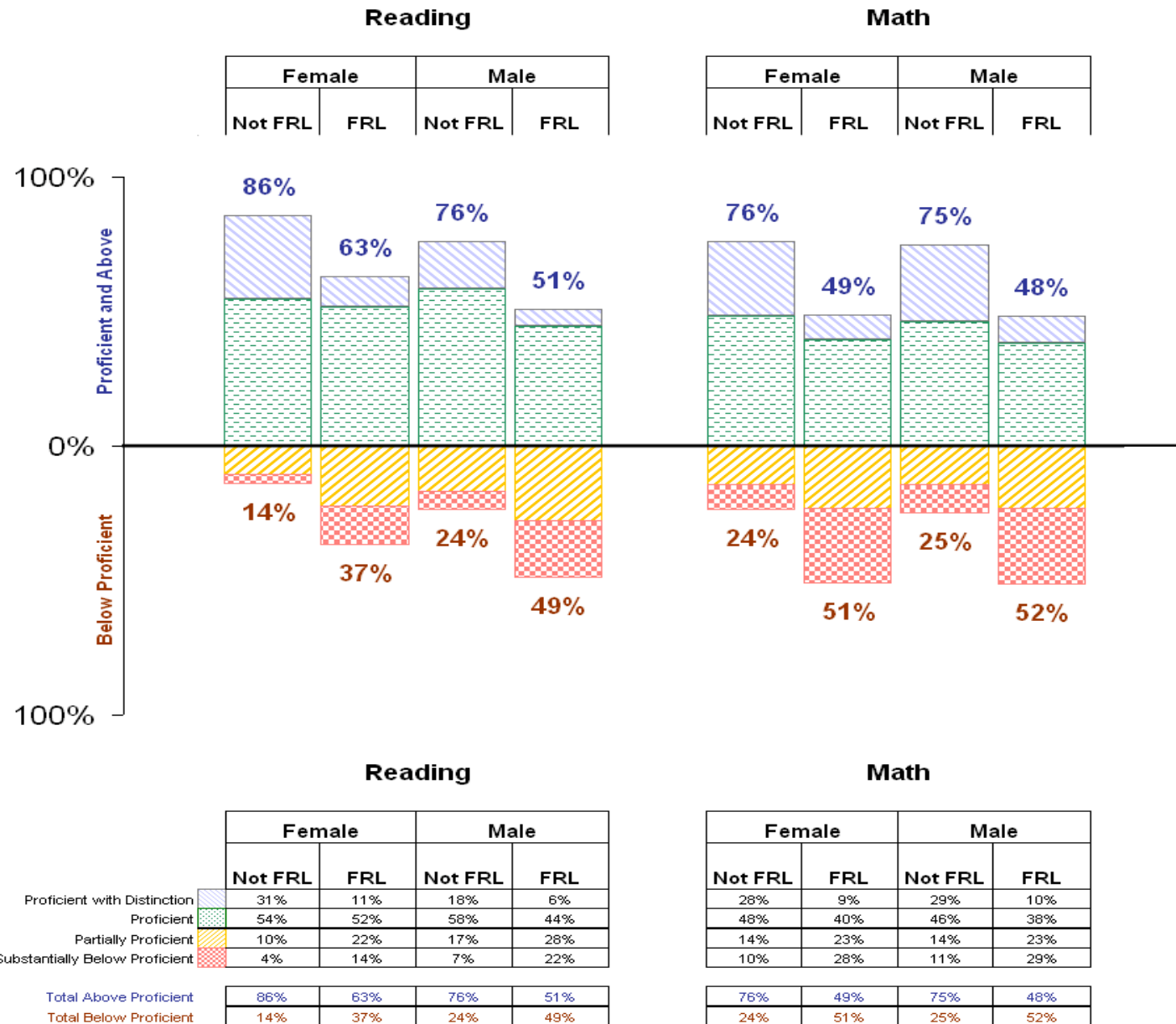
Are there differences in achievement related to family income?



	Reading		Math	
	Not FRL	FRL	Not FRL	FRL
Proficient with Distinction	24%	9%	28%	10%
Proficient	56%	48%	48%	39%
Partially Proficient	14%	25%	13%	23%
Substantially Below Proficient	6%	18%	10%	29%
Total Above Proficient	81%	57%	76%	48%
Total Below Proficient	19%	43%	24%	52%

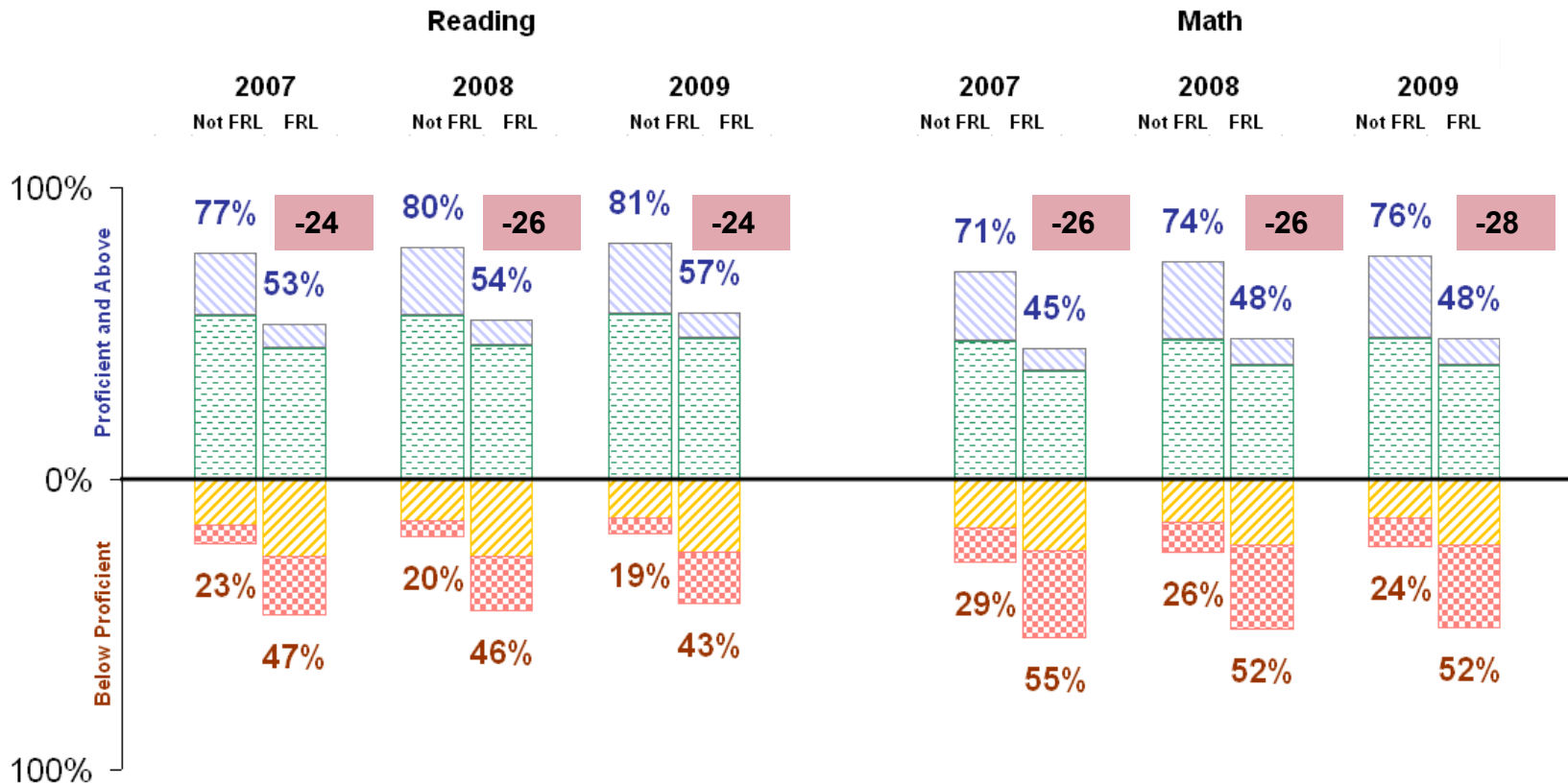
2009 NECAP Results for Grades 3 - 8: Comparison by Socio-Economic Status and Gender

Are there differences in achievement of male and female students related to family income?



2009 NECAP Results for Grades 3 - 8: Socio-Economic Status Comparisons

Are there differences in achievement related to family income? Are the gaps closing?



	Reading		Math	
	2007		2008	
	Not FRL	FRL	Not FRL	FRL
Proficient with Distinction	21%	8%	24%	8%
Proficient	56%	45%	56%	46%
Partially Proficient	16%	27%	14%	27%
Substantially Below Proficient	7%	20%	6%	19%
Total Above Proficient	77%	53%	80%	54%
Total Below Proficient	23%	47%	20%	46%

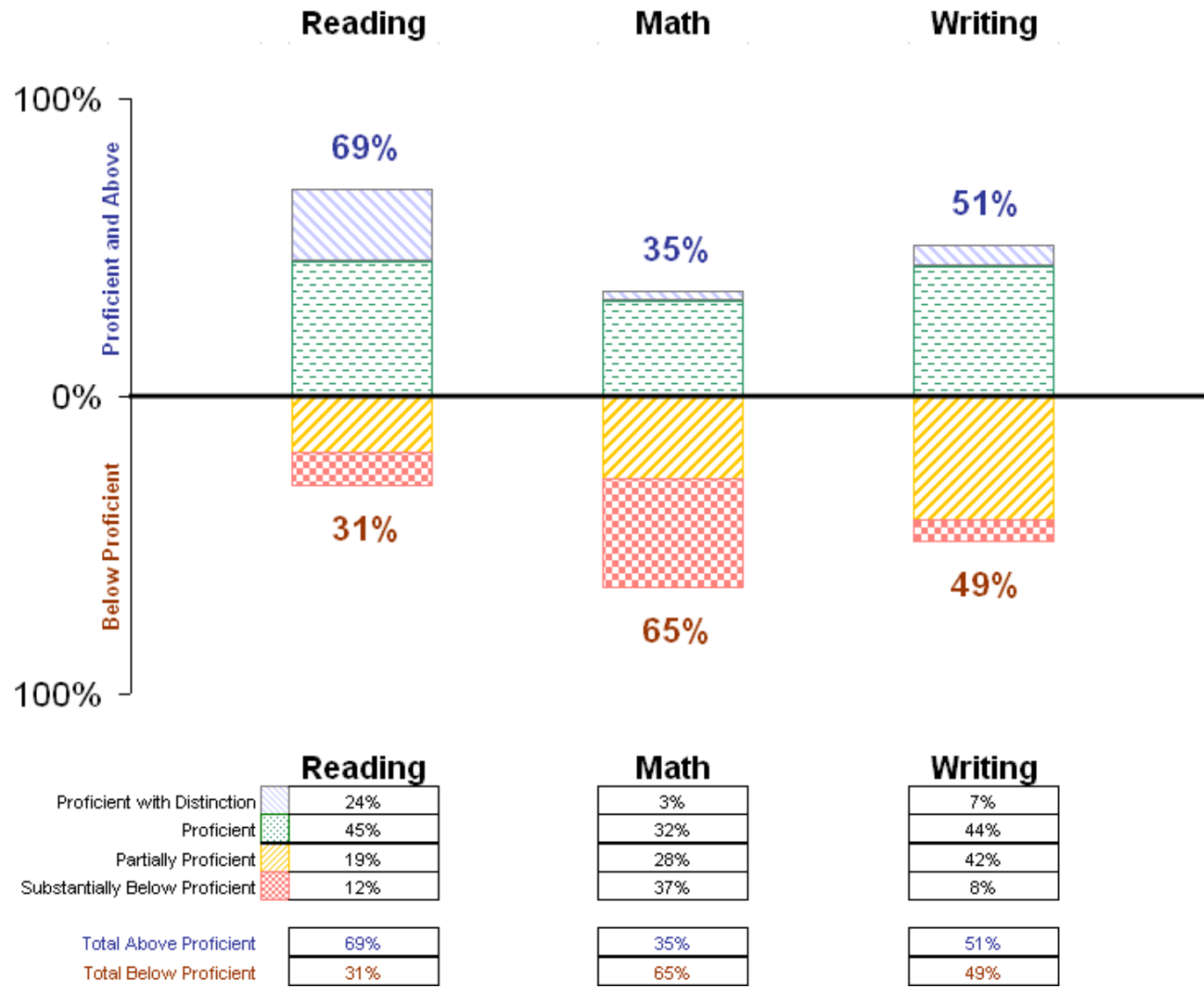
	Reading		Math	
	2007		2008	
	Not FRL	FRL	Not FRL	FRL
Proficient with Distinction	24%	8%	27%	9%
Proficient	47%	37%	48%	39%
Partially Proficient	17%	25%	15%	23%
Substantially Below Proficient	12%	30%	11%	29%
Total Above Proficient	71%	45%	74%	48%
Total Below Proficient	29%	55%	26%	52%



Statewide Analysis for Grade 11

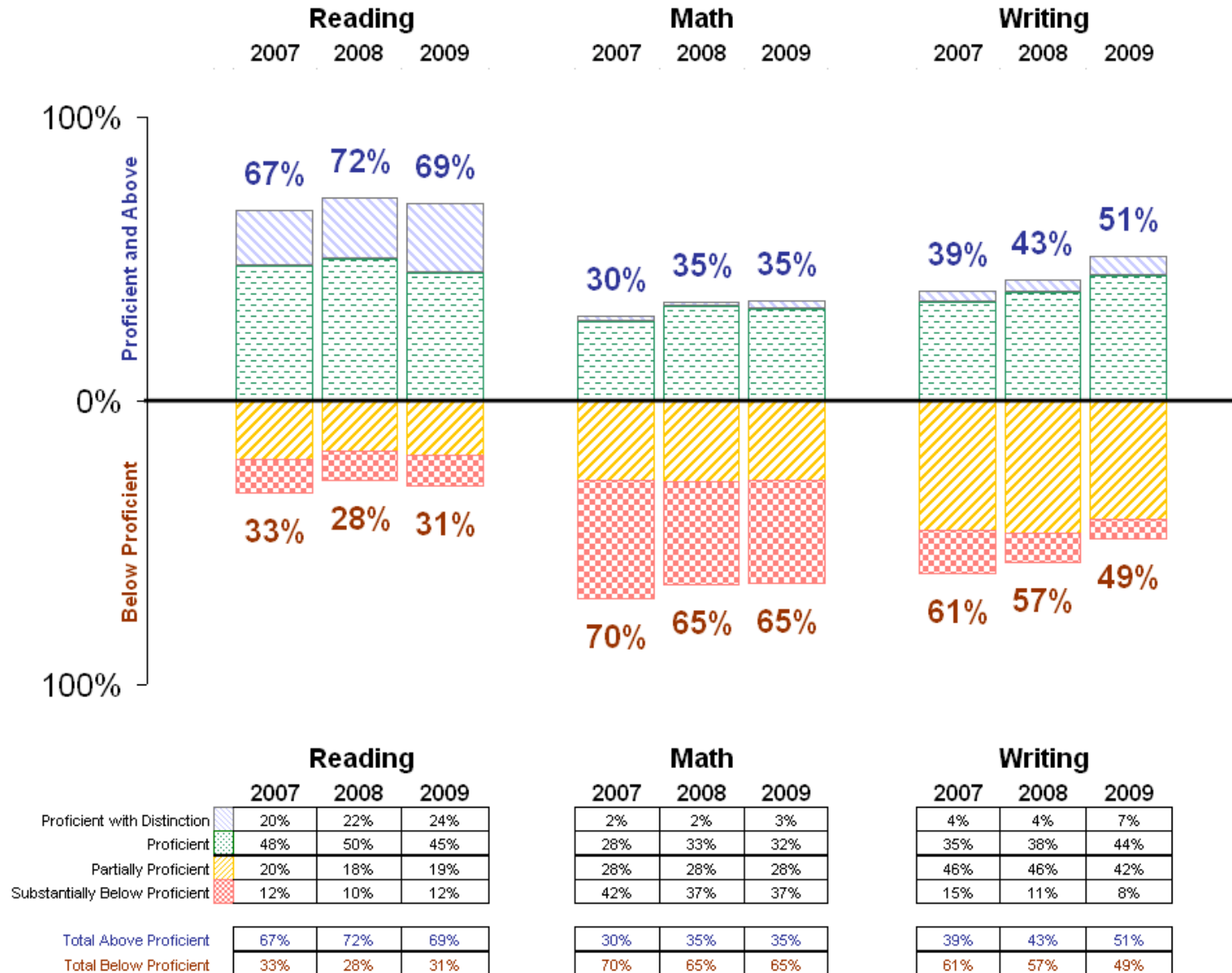
2009 NECAP Achievement for Grade 11

How did high school students do in reading, math and writing?



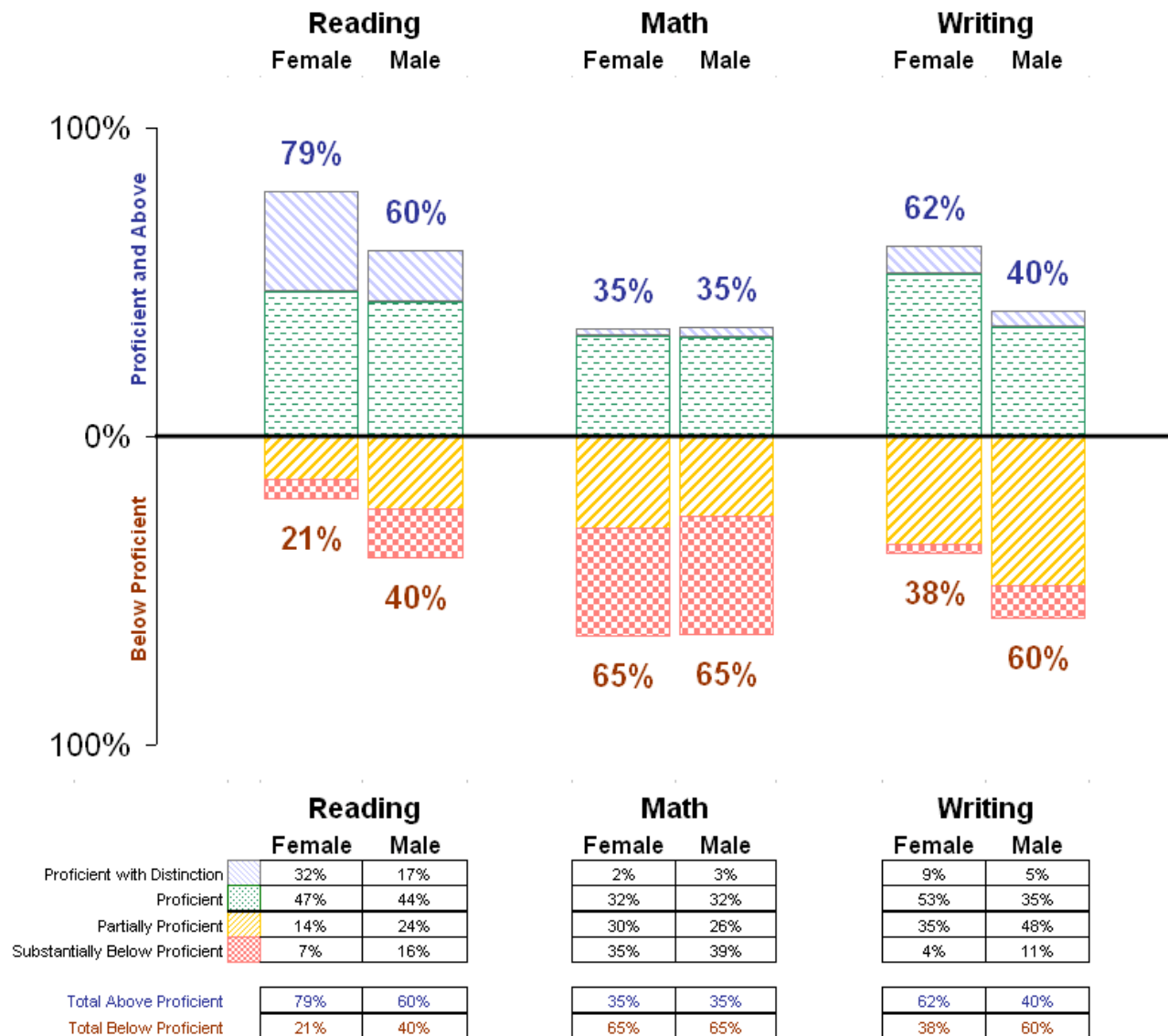
Grade 11 NECAP Achievement Over the Past 3 Years

How do 2009 scores compare with previous years? Are scores improving over time?



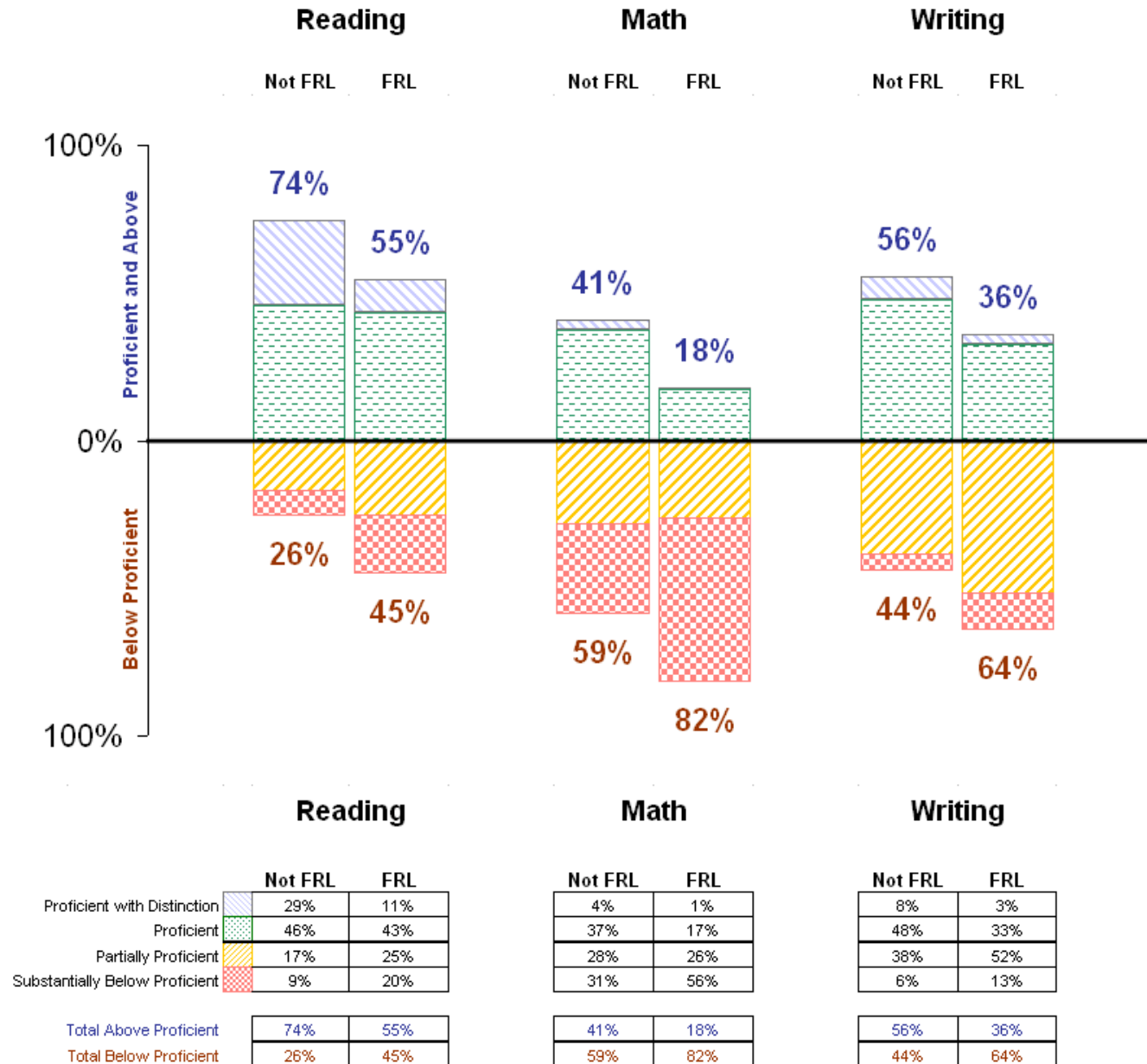
2009 NECAP Achievement for Grade 11

Are there differences in achievement related to gender?



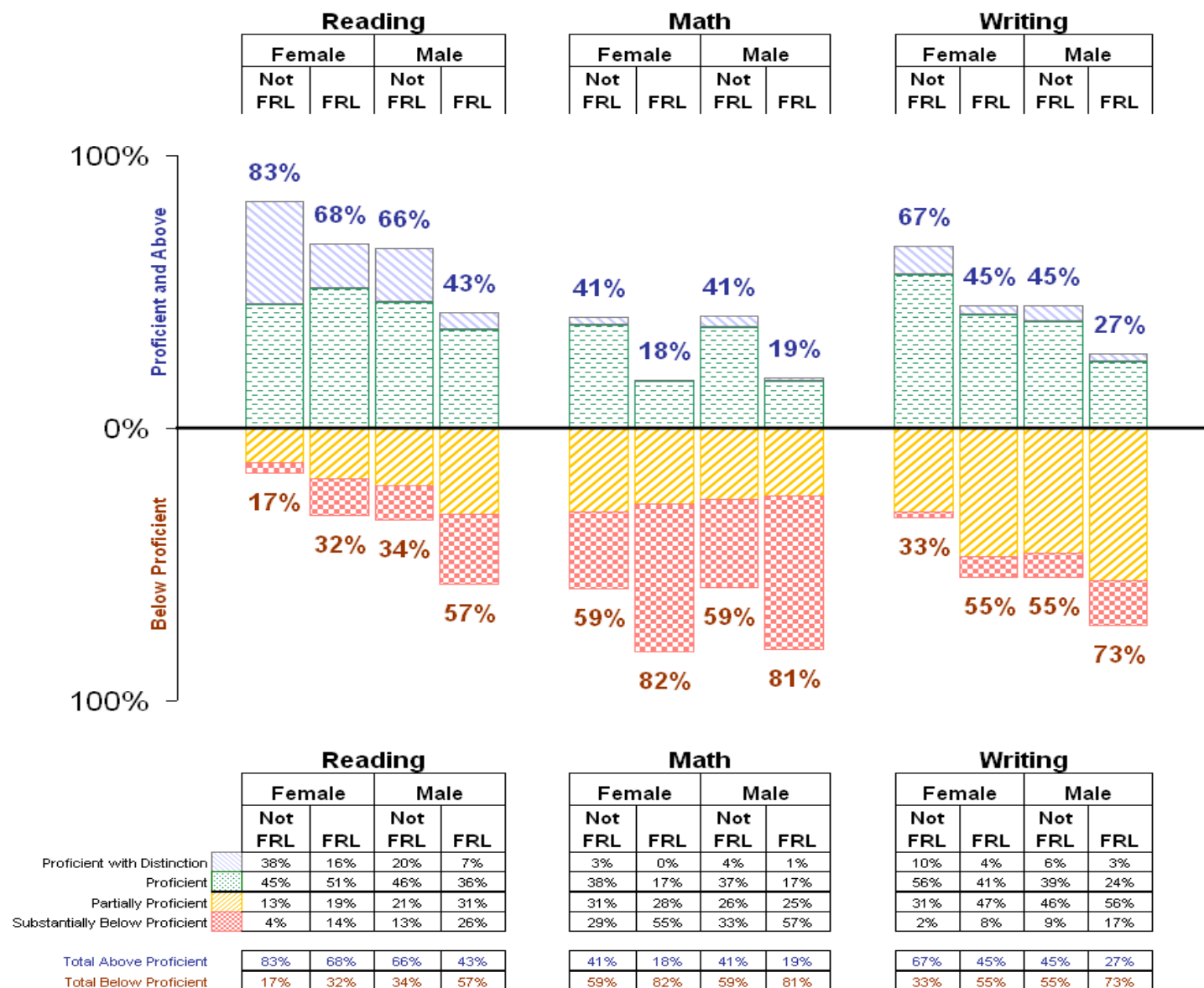
2009 NECAP Achievement for Grade 11

Are there differences in achievement related to family income?



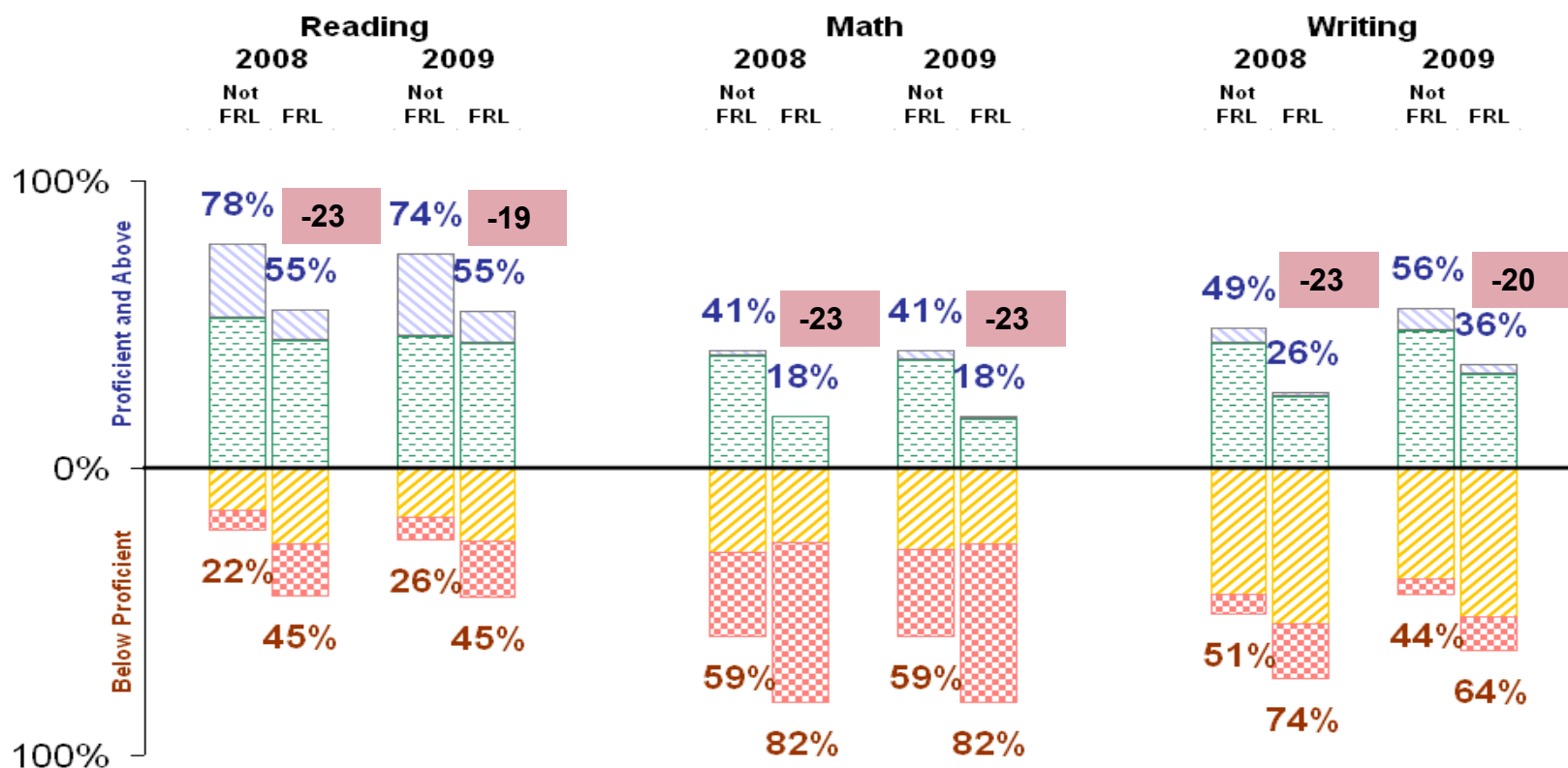
2009 NECAP Results for Grade 11: Comparison by Socio-Economic Status and Gender

Are there differences in achievement of male and female students related to family income?



2009 NECAP Results for Grade 11: Socio-Economic Status Comparisons

Are there differences in achievement related to family income? Are the gaps closing?



	Reading 2008		2009	
	Not FRL	FRL	Not FRL	FRL
Proficient with Distinction	26%	11%	29%	11%
Proficient	52%	44%	46%	43%
Partially Proficient	15%	27%	17%	25%
Substantially Below Proficient	7%	18%	9%	20%
Total Above Proficient	78%	55%	74%	55%
Total Below Proficient	22%	45%	26%	45%

	Math 2008		2009	
	Not FRL	FRL	Not FRL	FRL
Proficient with Distinction	2%	0%	4%	1%
Proficient	39%	18%	37%	17%
Partially Proficient	29%	26%	28%	26%
Substantially Below Proficient	30%	56%	31%	56%
Total Above Proficient	41%	18%	41%	18%
Total Below Proficient	59%	82%	59%	82%

	Writing 2008		2009	
	Not FRL	FRL	Not FRL	FRL
Proficient with Distinction	5%	2%	8%	3%
Proficient	43%	25%	48%	33%
Partially Proficient	44%	54%	38%	52%
Substantially Below Proficient	8%	19%	6%	13%
Total Above Proficient	49%	26%	56%	36%
Total Below Proficient	51%	74%	44%	64%



For Additional Information...

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